

Abstract

MPEG 1 Audio data compression is based on subband coding. A quantization is performed using a psychoacoustic model which is adapted to the masking behaviour of the human hearing. Each subband signal is quantized in such a way that the quantization noise introduced by the coding will not exceed the masking curve for that subband. In ISO/IEC 11172-3 two independent psychoacoustic models are defined. The output from these psychoacoustic models is a set of Signal-to-Masking Ratios, SMR_n , for every subband n . In order to calculate the SMR_n for the psychoacoustic model 2 according to the invention a Fast Fourier Transformation is performed with a length of $L=1152$ samples by calculating k subtransformations over 2^N samples with $k \cdot 2^N = L$ and fitting together the results of the k subtransformations.

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